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ABSTRACT

A pilot study examined the relationship between cooperative learning, speech communication skills, and the academic progress of gifted students. Subjects, five female undergraduate honors students, were interviewed regarding their life experiences and opinions of various learning styles. In addition, an open-ended questionnaire was distributed to 35 honors alumni requesting information about their preferred learning style. A thematic data analysis revealed relationship development and maintenance to be an important aspect of all learning experiences. Recommendations for the use of cooperative learning include valuing rather than exploiting gifted students and using cooperative learning as a supplementary rather than primary style of instruction. (A glossary of cooperative learning techniques and 29 references are attached.) (Author/RS)

Cooperative Learning for the Gifted Student: Contributions from Speech Communication

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Abstract

This paper examines the relationship between cooperative learning, speech communication skills, and the academic progress of gifted students. A pilot study was accomplished in which five female undergraduate honors students were interviewed regarding their experiences and opinions of various learning styles. In addition, an open-ended questionnaire was distributed to 35 honors alumni requesting information about their preferred learning style. A thematic data analysis revealed relationship development and maintenance to be an important aspect of all learning experiences. Recommendations for the use of cooperative learning include valuing rather than exploiting gifted students and using cooperative learning as a supplementary rather than primary style of instruction.

Cooperative Learning for the Gifted Student: Contributions from Speech Communication

Cooperative learning is an innovative educational strategy used to increase student outcomes. Slavin (1980) defined 'cooperative learning' to be "classroom techniques in which students work on learning activities in small groups and receive rewards or recognition based on their group's performance" (p. 315). Cooperative learning groups are characterized by peer tutoring, group goals, and individual accountability. Johnson and Johnson (1986) noted cooperative learning in heterogeneous student groups increases academic achievement and improves social skills. However, the perceptions of talented and gifted students regarding their involvement in cooperative learning groups remains unexplored.

This paper examines the relationship between cooperative learning, speech communication concepts, and the academic progress of gifted students. This area of inquiry warrants exploration due to the integral role talented and gifted students play in cooperative learning groups. We review information related to prevalent instructional strategies, identify the conceptual and practical use of speech communication skills for each strategy, and examine the role of talented and gifted students in cooperative learning groups. An exploratory pilot study enabled us to gain insight from talented and gifted students about their experience with and opinions of various

learning styles through interviews and questionnaires. A thematic data analysis procedure revealed the importance of interpersonal relationships in learning. We relate student comments to current literature on aspects of cooperative learning and offer recommendations for the use of cooperative learning in the college classroom.

Research Questions

Talented and gifted students are central to the success of many learning experiences in the classroom. However, their opinions regarding participation in various types of learning activities has not been previously examined. Therefore, two research questions guide this pilot study:

RQ1: What experiences have honors students had with different learning styles at the university level?

RQ2: What opinions do university level honors students hold of different learning styles?

Learning Styles/Interaction Patterns

Contemporary instructional strategies center around three prevalent types of learning experience: competitive, individualistic, and cooperative situations. This section overviews each of these learning styles. We discuss the educational foundation and use of speech communication skills for each instructional strategy.

Competitive Learning

Teachers have relied on competition as the stable instructional method for hundreds of years. Pitting one student against another is used frequently at all levels of education. Instructors may use competition without conscious intent or with the sincere belief that competition motivates students to learn.

"In a competitively structured situation students' goal attainments are negatively correlated; one student can obtain his or her goal if and only if the others with whom he or she is competitively linked fail to obtain theirs" (Cooper, Johnson, Johnson, & Wilderson, 1980, p. 244). Competitive learning situations result in students rivaling each other for superior accomplishment. Whenever norm-referenced grading is used and students are ranked "best to worst" or "first to last" they become participants in competitive instructional methods. The most common competitive learning experience is a teacher's use of a "grading curve" to determine student performance on coursework.

Competition is its own reward for the winners. For losers, the experience may be interpreted as temporary defeat, or as fodder for an already poor self-image. For students who lose, competition may evoke apprehension, hostility, and guilt leading to feelings of rejection and worthlessness (Johnson & Johnson, 1987). In some cases, students who do not win despite valiant attempts may consider cheating or implementing strategies for sabotaging their competitors. Conversely, competition can teach

students social skills obscured in other contexts. This is particularly apparent when intergroup competition requires intragroup cooperation (Johnson & Johnson, 1987). Sportsmanship, self-motivation, and self-monitoring find easy application in competitive situations.

Social Skills in Competitive Learning. Interpersonal competition was emphasized in American schools from the late 1930s through the 1950s. Since that time, competitive learning has been central in American education. This section examines social skills students use when engaging in competitive learning experiences.

Rules of the competition control interaction between students. While students may discuss their progress, they are not encouraged to share their ideas or solutions. Some interaction may be required to compare progress, however, "little discussion is allowed apart from challenges to the correctness of each other's answers" (Johnson & Johnson, 1987, p. 89). Other interaction is managed around guidelines which encourage students to "play fair," "have fun," and "be good winners and losers" (Johnson & Johnson, 1987, p. 89).

In competitive learning situations each student competes against his or her peers, and a student's primary source of assistance, feedback, and support is his or her teacher. Interpersonal communication skills present in competitive learning include listening and message construction skills.

Students must understand procedures, rules, criteria for winning, and the definition of what is and what is not a correct answer. Students must compose messages to ask questions of the teacher to check for comprehension. Students must also have the ability to present ideas clearly and provide constructive feedback to others. This skill is primarily used during the process of debriefing an activity, a time in which student arguments or hurt feelings may be examined. "Because competition involves much less interaction among students and less coordination of behavior, fewer skills are essential to competing than cooperating (Johnson & Johnson, 1987, p. 101).

Individualistic Learning

Individualistic learning emerged during the early days of pilot groups for talented and gifted students. Reacting to Sputnik and the apparent superiority of education in the Soviet Union, North American schools tapped bright students, clustered them into homogeneous classes, and developed self-directed learning programs for them (Tannenbaum, 1979).

"In an individualistically structured situation the goal attainment of each student is unrelated to the goal attainment of others; one student can obtain his or her goal irrespective of whether other students obtain their goals" (Cooper, Johnson, Johnson, & Wilderson, 1980, p. 244). Students in individualistic learning programs work independently to achieve learning outcomes. Programmed texts, self-paced study guides, independent

studies, and procedures for "testing out" are applications of individualistic learning environments. Students work toward standardized criteria which measure achievement. Everyone who reaches the criteria succeeds, therefore eliminating the necessity of bettering someone else's performance to achieve the goal.

Students involved in individualistic or autonomous learning situations greatly enhance their chances for success if they possess certain skills. These skills include making a personal commitment to learning the material, being able to tune out extraneous noise and focus on the work at hand, monitoring and pacing one's self, and evaluating one's progress toward the designated outcome (Johnson & Johnson, 1987). Incompetence in any one of these skills could limit a student's progress toward achieving his/her goal. Social skills are noticeably absent from this list.

Social Skills in Individualistic Learning. Individualistic learning situations require students to work independently. "No interaction should occur among students. Students should work on their own without paying attention to or interacting with classmates. Because each student is working on the task at an individual pace, student-student interaction is intrusive and not helpful" (Johnson & Johnson, 1987, p. 68).

The teacher is the student's major source of assistance, feedback, reinforcement, and support. If assistance is needed,

students request information from the teacher, not other students. The primary form of communication in individualistic learning occurs when teachers ask questions to evaluate student understanding. This communication "ensures that thorough two-way communication exists, that the assignment has been given effectively, and that the students are ready to begin completing it" (Johnson & Johnson, 1987, p. 70). The desired behavior for students is to work without interacting with other students.

Cooperative Learning

By the mid 1970s Robert E. Slavin and his associates at Johns Hopkins University established the effectiveness of a specialized group learning technique called Teams-Games-Tournament (TGT). (See Appendix A for Glossary of Cooperative Learning Techniques.) Originally called team techniques and later called cooperative learning techniques, the foundation of this new group form is simple: "In a cooperatively structured situation students' goal achievements are positively correlated; when one student achieves his or her goal, all others with whom he or she is cooperatively linked achieve their goals" (Cooper, Johnson, Johnson, & Wilderson, 1980, p. 244). Effective group learning techniques rely on three essential elements: "individual responsibility for group members instead of 'group products,' a formal group reward system, and a structured schedule of activities tied to the team program" (Slavin, 1978, p. 39).

Slavin (1978) asserted the success of the TGT model and introduced a new, improved version called Student Teams-Achievement Divisions (STAD). Later he offered two additional forms of the original TGT structure--Team Assisted Individualization (TAI) and Cooperative Integrated Reading and Composition (CIRC), which also use structured schedules of activities. In addition, three forms of cooperative learning groups which appear to be less structured were developed--Jigsaw, Learning Together, and Group Investigation (Slavin, 1991a). While it is not within the purview of this paper to overview each of these learning techniques, brief explanations are offered in Appendix A.

Johnson and Johnson (1987) insisted leadership in cooperative groups be shared rather than formally assigned by the teacher. They address two forms of leadership--group leadership and leadership in the form of peer tutoring (see pp. 110, 119). Goodlad and Hirst (1989) defined peer tutoring to be "the system of instruction in which learners help each other and learn by teaching," and a system which can "ease the strain on teachers" (p. 13). In addition, Johnson and Johnson (1987) listed several social benefits to peer tutoring, as well as the benefit of "learning to teach, a general skill that can be very useful in an adult society" (p. 110).

Social Skills in Cooperative Learning. The bulk of Johnson and Johnson's (1987) writing addresses communication issues.

This heavy reliance upon communication competency renders cooperative learning fertile ground for scholars and practitioners in the field of speech communication.

Strongly disposed to the interpersonal paradigm, Johnson and Johnson (1987) asserted social skills must be directly taught to students engaged in cooperative learning groups. They list paraphrasing skills, building trust, leadership, and "controversy skills" in their discussion on student acquisition of "collaborative skills." Collaborative skills include working in the group as well as discussing how well the group collaborates on ideas.

Intense interaction occurs among students in cooperative learning situations. Interaction takes the form of "helping and sharing, oral rehearsal of material being studied, peer tutoring, and general support and encouragement" (Johnson & Johnson, 1987, p. 44). All members are expected to engage in positive interaction and contribute to group success. A student's major resource for assistance, feedback, reinforcement, and support are other students in his/her cooperative learning group.

Johnson and Johnson (1987) outlined socially desired behaviors from students engaging in cooperative learning experiences. These include being able to explain how the answer was determined, relate responses to previous information, encourage student participation, and engage in active listening behaviors. Slavin (1991a) noted cooperative learning strategies

improve student achievement and enhance "the quality of their interpersonal relationships" (p. 71).

These three prevalent learning strategies each require the use of different social skills from students. Students rely heavily on interaction with the teacher in competitive and individualistic learning. In cooperative learning, student interaction with other students becomes a key component for group success. Our interest in gifted students leads us to examine their use of social skills in cooperative learning situations.

Application of Cooperative Learning Principles to the Gifted Student

The history of educational concern for the talented and gifted (TAG) charts like a roller coaster, rising and falling conspicuously as politics and economics dictate. Government and private funding for academic excellence programs offered superior students access to specialized programs designed to capitalize on their abilities. Interest and funding "reached its apogee in the early 1960s, fell to a nadir in the early 1970s" (Gold, 1979, p. 218) and has since continued in ebb and flow, dependent upon politics of the times. During the period of most support, several colleges and universities established programs for their superior students: research programs, Advanced Placement (AP), College Level Examinations of Proficiency (CLEP), and honors programs remain the most enduring.

Very little research has been published which examines cooperative learning and gifted students. Journal for the Education of the Gifted (1990, issue 1) documents a substantive analysis of cooperative learning research. In this issue, Ann Robinson from the Center for Research on Teaching and Learning at the University of Arkansas challenged Slavin's application of cooperative learning techniques to the paradigm of the gifted public school student.

Robinson (1990a) took issue with conclusions drawn by advocates of cooperative learning--many of them unfounded in the literature and experience of the talented and gifted student. She identified problems with researcher definitions and sampling techniques which invalidate the transfer of findings from "high achievers" to gifted students. She explained an important problem with some studies: the "ceiling effect," or the task being so easy that it fails to discriminate between performance levels. She challenged researchers to compare cooperative learning with "subject matter acceleration" rather than individualistic learning to offer a truer test of comparative effectiveness. In addition, Robinson (1990a) cited "the failure of cooperative learning to produce consistent positive effects on higher level outcomes" (p. 18). These limitations fuel a major concern Robinson (1990a) expressed: cooperative learning group situations allow for potential exploitation of the gifted student.

Given the heterogeneous composition of true cooperative learning groups, the likelihood that a gifted student will emerge as the "explainer" is high. Robinson (1990a) pointed out that the effectiveness of the cooperative learning treatment may "depend on the ability of a bright student to articulate explanations to team members on demand" (p. 18). She questioned outcomes of research based on such a personalized variable and queried the ethics of cooperative learning instruction. Robinson (1990a) wrote passionately her thoughts on the issue of exploitation:

> The tendency to view talented students as ancillary classroom helpers rather than children with individual needs, curiosity, and desires of their own devalues them. In so far as cooperative learning crystallizes this view of talented children, it becomes exploitation rather than cooperation. (p. 21)

Compounding the issue of exploitation is the additional social pressure cooperative learning places on "explainers." Faced with the explicit charge to help the group succeed, the explainer is also faced with the implicit pressure not to offend the other students by bossiness, bias, or pedagogical incompetence. Although evidence indicates gifted students are "no more likely than the general cohort to suffer peer or adjustment difficulties" (Robinson, 1990a, p. 20), the student taking the role of explainer performs under more demanding

circumstances than may suit his/her social skills. Robinson (1990a) also counts this as exploitation.

Slavin (1991c) addressed the issue of exploiting bright students: "In all cooperative methods, students are learning material that is new to all of them" (p. 70). He argued that since material is new, students will learn at the same pace, and no one student will emerge as the "explainer." Slavin's (1991c) comments appear in stark contrast to Johnson and Johnson's (1987) emphasis on peer tutoring.

Robinson (1990b) suggested two applications of cooperative learning most beneficial to talented and gifted students. First, the use of cooperative learning to enhance a talented student's performance in "an area of relative weakness rather than area of strength" (p. 35). This application will restore equity to a potentially unjust system. The talented student's chances of learning "new" material rather than reviewing for the benefit of other group members justifies the cooperative method. Slavin (1990b) agreed gifted students stand to benefit more from cooperative learning techniques if they have not already mastered the content. Where accelerated content is indicated for the gifted student, Slavin (1990b) recommended "regrouping," presumably creating groups of relative heterogeneity referred to in an earlier statement (1990a). This recommendation seems to us to find application in special honors sections on university campuses.

Second, Robinson (1990b) recommended use of cooperative forms which "permit some acceleration of content and skills and which make individual accountability clear" (p. 35). The Jigsaw model may be a likely candidate for this application. Incorporating individual accountability is another form for restoring equity to a learning style which encourages exploitation.

Literature on learning styles, social skills, and the application of cooperative learning principles to talented and gifted students provides background for our investigation. In addition, Callahan (1979) noted research which examines teacher behavior, organizational reward systems, test bias, and social biases suggest many cultural handicaps for the gifted woman. As female educators, we are interested in assisting women to overcome societal constraints. One way to do this is to examine learning styles for possible contradictions between prevalent strategies and preferred strategies. Research findings associating cooperative learning and gifted students are sparse, and when available are predominately conceptual or quantitative. Absent are studies examining female gifted students perceptions of cooperative learning situations. We advocate asking talented students about their experiences and opinions of various learning styles.

Research Method

This pilot study employed mini-focus group interviews and open-ended questionnaires to obtain insight about the learning styles of talented and gifted students. We selected a qualitative method because our research purpose aligns with the goal of interpretive research--to understand the world as seen by respondents (Patton, 1990). Personal perspectives and educational experiences of gifted students will help us understand their learning style.

Focus group interviews are guided by a moderator seeking responses from a group of female participants. Each interview lasts approximately 75 minutes. This technique provides an opportunity for dialogue to occur between individuals (Krueger, 1988; Morgan, 1988). Mini-focus groups are similar to regular focus groups albeit with a smaller number of respondents (Johnson & Arneson, 1991). A member of our research team served as mini-focus group moderator and used a moderator guide exploring honors students' opinions and experiences with various learning styles at the university level.

Undergraduate students were contacted through a university honors program director during September 1992 for voluntary participation in our pilot study. Five female undergraduate honors students were interviewed in two groups. One group contained three students, and the other had two students. Their academic standing ranged from first semester freshman to senior.

Students responded to questions about learning experiences at the university level, social skill development, and their preferred learning style.

In addition, a questionnaire was distributed during September 1992 to 35 recent graduates of a university honors program. All graduates of this program since 1988 were surveyed. Subject names were made available by a university level honors program director. The questionnaire listed educational scenarios for four courses: English, Math, Sociology, and Biology. An instructional objective and learning options were identified within each scenario. Each student was asked to select a preferred instructional strategy to accomplish the defined learning objective for each course. The student could select to accomplish the objective through a competitive, individual, or cooperative learning experience. Scenarios were modeled after Johnson and Johnson's (1987) discussion of characteristics of different learning styles. Open-ended questions offered students an opportunity to explain their selection.

Fourteen questionnaires were completed and returned. The structure of the questionnaire enabled us to check consistency of learning style selection across content areas. Questionnaires were also made available to members of the mini-focus groups for their responses. Combining the two techniques allowed us to check for varying responses across face-to-face and written interactions.

A thematic data analysis technique revealed information from the data. The purpose of thematic analysis is to "understand the meaning of the communication . . . within the context of the respondent's own frame of reference" (Mostyn, 1985, p. 118). Thematic analysis reveals the complex nature of relationships and enables the researcher to uncover the significance of communication (Owen, 1984).

Following transcription of the interviews, data was analyzed in a four-step process to discover recurring themes. After careful examination, "recurrent, repetitious and forceful discourse" was color coded on the transcripts (Owen, 1985). Second, quotations were extracted and placed under general cover terms that encompassed significant semantic relationships revealed in the discourse. Third, quotations falling under the cover terms were color coded in relation to recurring themes. Fourth, associations were made between themes. The final part of the process involved comparing interview data with the responses from the open-ended questionnaires to either affirm or discount emergent themes. In the findings section we identified women who were interviewed by a number. Questionnaire responses are identified by a letter corresponding to the educational scenario and number of the questionnaire in order of return (e.g., E5 indicates a verbatim comment from the English scenario on the fifth questionnaire returned). Subject anonymity was assured for interview and questionnaire respondents.

Discussion of Findings

This section offers findings from a thematic analysis of subject responses about competitive, individualistic, and cooperative learning experiences. The relationship between learning style, interpersonal relationships, and performance evaluation is central to honors students' perceptions of learning styles. The importance of interpersonal relationships with others is key. This section offers findings related to honors students' perceptions of learning styles and issues associated with cooperative learning experiences.

Learning Styles

Competitive Learning. Many honors students enjoy competitive learning. One reason for this enjoyment may be the realization that competitive learning can viewed as individualistic learning. Two people expressed their views on competitive learning:

S11: "I like the idea of having a student in the class set the curve. Let's face it. In the real world, you're only as good as your competition makes you."

1: "I guess I was fortunate enough to always be on the upper end of the curve . . . . It was almost more of an individualistic type of assignment."

Interpersonal relationships are a key component of competitive learning. Students noted their intelligence "intimidated" other students. Two honors students illustrated social problems with

other students which occur due to superior performance on a "curve":

2: "He just broke the curve every time and he happened to be in our class. If he'd been in the nine o'clock class it wouldn't have effected us."

1: "You guys set the top curve and we have no chance. Well they see that and they like a lot of 'em resent you for it."

Maintaining relationships with others is important to honors students. Talented students strive to balance the tension between high achievement and resentment from others due to their superior performance.

Individualistic Learning. Honors students overwhelming selected individualistic as their preferred learning style. Two subjects offered support for their selection:

2: "I love the indiv, I like it when teachers say if everybody in this class gets an A in the class, everyone gets an A, you know."

E13: "I would much rather work by myself at my own pace than get frustrated by others' lack of motivation."

Socialization is an important reason for selecting individual learning. Students selected individualistic learning primarily because their relationships with others are not jeopardized. Three written responses revealed a preference for individual learning related to interpersonal relationships:

M6: "People aren't afraid to 'blow the curve.'"

M9: "I don't like curved scales because we can penalize . . . others!"

E5: "If test early you get too much negative feedback from peers."

Individual learning allows honors students to challenge themselves to perform to the best of their ability without the possibility of negative relational repercussions.

Cooperative Learning. Cooperative learning presents an interaction between two important areas for honors students--positive relationships and tutoring other group members because of the interdependent grade dimension. People expressed concern regarding cooperative learning:

4: "I hated it. I hated it so much. It was, it was hard for me to depend on other people because either you know they didn't care or they didn't wanna work as hard as I did."

5: "It was nice in the sense that you were kind of helping each other. But also . . . it felt like you kind of were dragging . . . you had to stop and keep repeating."

B4: "Being highly upset by this method, I would probably write off this portion of my grade . . . and study extra hard for individual tests."

B3: "The entire group would be reduced to the level of its weakest student. One does not stimulate excellence by

lowering the standards."

Relationships with others present a unique challenge in cooperative learning experiences. Two women addressed this situation:

5: "When you're in that peer situation you can't just say, . . . you're gonna ruin my grade or, it's just, it was really uncomfortable. I didn't like it at all. I didn't learn very much."

4: "Cause I didn't wanna sound bossy. And at the same time I didn't want my grade to be in jeopardy."

Students work within the perceived tension between relationship success/personal success as best possible.

Many aspects of cooperative learning were covered in subject responses. Subjects recognized the value of group work, and noted their preferred group composition. Furthermore, subjects discussed two types of personal involvement in learning groups where a group grade will be assigned: a student may close-down or engage in peer tutoring. Discussion of peer tutoring yielded insight about social skill development achieved through cooperative learning.

Cooperative Learning Involvement

Group work was perceived by honors students in several ways. One woman identified groups as social, and therefore less task-oriented: "You know they didn't want you to get so much out of it or they wouldn't have put you in groups." Another woman

stated group work helps build team skills: "In the working world . . . you will be expected to be able to deal with people. And so you have to be able to succeed with a group of people." The instructional value associated with group work was identified by one woman: "I guess [it] goes back to the competitive part. They think that your peers are gonna challenge you more. So that maybe you'll get more out of the course."

Of interest, we noted subjects did not identify intelligence as a factor in their preferred group composition. Instead, two subjects discussed personality characteristics:

1: "It goes to the people who are the most reliable . . . the ones who show up to the study group . . . the ones who do the, their part of the study guide. It's gonna be some people who you know do not excel in that class material but they want to know it so bad because they have to get a good grade."

2: "What the intelligence level doesn't matter, or where they're at in the course or how much they've read, or how much homework they've procrastinated on. It's cooperativeness and willingness to learn."

A good group member was identified to be reliable, conscientious, cooperative, willing to learn, and having a desire to succeed.

Group grades are often associated with cooperative learning. Four subjects expressed their feelings about group grades:

2: "I heard group presentation and I just went [freeze].

It's the grades, it really is."

1: "If you're an A student, you don't wanna rely on anybody else."

5: "It seems like people automatically think that gifted students would like to work in groups and that they would all contribute the same amount. But that is not the case at all."

4: "It made me mad because I had worked so hard. But I got no reward for that. It was because somebody else decided not to do the work. I had to suffer."

Two types of action may emerge in response to a group grading situation: students may choose to close-down or engage in peer tutoring.

Close-down is one possible response to perceived exploitation during a group grading situation. One student addressed a cooperative learning examination situation. She shared the testing process and noted following achievement of an individual score, the team got together and took the same test as a group:

5: "I'd already got the grade on the test that I felt that I deserved . . . I want other people to do well and things but I figure if they would have studied they could have got the same grade that I did."

Another person addressed others' reliance on her abilities:

B4: "Whenever I have been in situations like that I have

felt so taken advantage of by other members in the group that I pull back, learn the information on my own, and do not share my knowledge!"

Subjects may engage in these behaviors when exploitation by others occurs. However, when students do not feel exploited they may choose to engage in peer tutoring.

Peer tutoring means assisting members of the group to reach a level of competency equal to that of the highest achieving member of the group. Two subjects commented:

2: "I really like to work individually but I'm a real people person. I'm willing to do it with you know good humor because I peopl. have done it for me and I realize this person needs help. Now if they're just trying to ride off me . . . grrr, you know."

4: "I liked it. I like to do that part. I didn't mind sharing it with other people."

Social skills are necessary in peer tutoring situations. Three people expressed difficulty in peer tutoring situations because of a perceived inability to express themselves clearly to others:

3: "I have a hard time if they can't get it, I have a hard time like really <u>explaining</u> it to them. Cause I know how it's supposed to go and I just, I if they really can't get it, it just takes me a long time to explain it them. Takes me a long time."

4: "It's hard to talk to someone who isn't at the same level that you are maybe. They get frustrated because they can't do it and I don't know if I'm just not explaining it well enough to them or if they just don't get it or what. And that's really frustrating. To not be able to help them or not to be able to communicate with them I guess."

5: "I really want to help but it just doesn't seem, the way that I understand it they don't understand and I don't know necessarily how to present it in a way that they will understand. And so it does get really frustrating."

Despite related frustrations, students were willing to engage in peer tutoring. However, they had strong views about assuming the role of the instructor.

5: "[Cooperative learning] felt like that I was doin' the job of the teacher. I'm not here to be the teacher."

E15: "Group projects allow the instructor a chance to not teach, but to rely on the groups to teach themselves."

E12: "[Have] to do the job of the teacher. It is not fun to 'carry' a group."

These issues emerged in relation to honors student involvement with cooperative learning experiences. In addition, to this discussion, each student was asked to identify a preferred learning style.

Preferred Learning Style

The preferred learning style honors students expressed during interviews and on questionnaires was the individual learning situation. Representative comments include:

2: "Well, I like individual work because I like to challenge myself and I'm competitive with myself."

3: "I like individual myself."

4: "I'd like to have a combination of competitive and individualist. I think individual's a little higher than competitive."

B13: "As much as I am certain that the process of learning requires discourse, debate, and, yes, dependence upon the guidance and wisdom of those around you, I am equally certain that it begins, and ends, with the individual."

The following summary of questionnaire responses supports a preferred individual learning style.

Preferred Learning Style	Educational Scenario		
	English	Math	Sociology
Cooperative	2	3	0
Competitive	6	3	2
Individual	10	12	15

This section offered findings made available through interviews and questionnaires. Learning style, interpersonal relationships, and performance evaluation are closely related for

honors students. Issues associated with cooperative learning group involvement were also discussed.

Discussion

Our preliminary findings call for careful examination of several aspects associated with the use of the cooperative learning strategy. In this section we discuss the overlap between our findings and several related works. Specifically, we relate our findings to scholarship on learning styles of gifted students, social interaction in cooperative learning situations, and use of group grading.

Johnson, Johnson, Roy, and Zaidman (1985) document the presence of data which clearly recognizes high achieving students perform better in individualistic conditions. Although they choose not to expand upon this finding in their article, our research supports their raw data. This recognizes that cooperative learning may not be the best learning strategy for advancing talented students' academic performance.

Slavin (1983) found group members will give or withhold social reinforcement toward others based on his/her effort in accomplishing a task when rewards are based on group performance. Our research supports these findings. We found not only will honors students close-down, they may do so at great cost to their own performance. One important finding emerged which is not clearly evident in data collected for this pilot study: a student's choice to close-down may be determined by weighing

individual performance measures against the weight of cooperative performance measures as they comprise the final grade. A student then makes the decision to close-down based on perceived importance of relationship involvement versus personal performance.

Slavin (1991a, 1991b) currently supports two opposing positions regarding the use of grades to ensure equitable collaboration among group members. At one point Slavin (1991a) stated "I am personally very opposed to the practice" of group grades--"grades can and should be given based on individual performance" (p. 70). Yet later in the same journal issue Slavin (1991b) advocated grades for reward (p. 90). Our subjects reinforced clearly what Slavin already appears to know yet cannot conclude because it violates a principle of cooperative learning: students "hate" interdependent grading systems and they should not be used.

Our pilot findings are encouraging and a full study investigating these issues will be accomplished. However, two design decisions will be changed. First, additional questionnaires will not be distributed. Questionnaires reinforced interview data and despite their value, offered redundant information without the opportunity to follow-up responses. Second, individual standard interviews with female honors students will occur rather than attempting to use focus groups. We thought interaction between honors students on this

topic would be valuable. However, the challenge to schedule focus groups with "independent" learners and weak interactive data support the use of standard open-ended interviews. These preliminary findings suggest several recommendations for application of learning strategies in the university level classroom.

Recommendations for Using Cooperative Learning at the University-Level

Two issues are central in our recommendations. First, we recommend composing learning strategies which avoid exploiting gifted students. Second, we encourage the use of a variety of instructional techniques rather than relying solely on a cooperative learning approach.

The expert student matched with students who are novice in a subject area runs the greatest risk of exploitation. The greatest potential for academic achievement seems to exist when expert students can be grouped together in groups (which are then only relatively heterogeneous) and rely on individualistic learning to prepare for their group contribution. Thus, honors classes seem likely contexts for the application of a cooperative technique such as Jigsaw.

Slavin's work has been with more structured cooperative forms (TGT, STAD, TAI, CIRC). These forms may lend themselves to more equal contributions by group members than do less prescriptive forms. It seems impractical to apply cooperative

learning models such as TAI and CIRC, and the lengthy scorecard evaluation schemes found in Johnson and Johnson (1987) to the post-secondary context. Whether streamlining the cooperative forms leads to greater opportunity for exploitation of the "explainer" is largely undocumented, but intuitively probable.

When dealing with gifted or expert students, special care must be taken to avoid exploitation of one for the benefit of many. Judicious application of competitive and individualistic techniques is essential to meet the needs of gifted students. Individualistic study allows accelerated skill development. However, to never use cooperative learning seems as irresponsible as to always use cooperative learning.

Suggestions for Future Research

One recommendation for enhancing our understanding of student learning styles is for more specific research. Neglected samples include the post-secondary student and the gifted student in both public and post-secondary contexts. The effect of cooperation on learning higher-level skills (e.g., conceptual, theoretical, application) is largely unknown. The parameters of optimum heterogeneity within groups at varying levels of learning and for varying levels of achievers remain undetermined. Finally, the possible integration of theories of adult learning and cooperative learning seem to beg investigation.

Summary

This paper examined the relationship between cooperative learning, speech communication skills, and the academic progress of gifted students. A pilot study was accomplished involving both face-to-face interviews and open-ended questionnaires. A thematic data analysis revealed relationship development and maintenance to be an important aspect of all learning experiences. Recommendations for the use of cooperative learning were offered.

In closing, we share a comment offered by a female honors student in response to the question, "What would you tell instructors about yourself that might assist them in helping you learn?" One woman encouraged us:

> 4: "Just to take me as an individual. Not to stick me with a group or generalize about how this class did, but just judge me as an individual. That I have my own abilities and that maybe I don't do as well in that class but I have other talents too."

Appendix A

Glossary of Cooperative Learning Techniques

Teams Games-Tournament (TGT)

For use in grades 2-12 to develop Math, Language Arts. Science, Social Studies skills such as graph reading and geography, and any material with single right answers. (See DeVries & Slavin, 1978; Slavin, 1986)

TGT was the first of the cooperative team learning methods developed by the Slavin-led Johns Hopkins group. The method uses teacher presentations and base group team study to prepare for team tournaments. Students from the base groups are then sent out to tournament tables to compete in ability-homogeneous groups to earn points for their base groups. Thus, low achievers compete against other low achievers in tournaments, with the same chance of winning points for their teams as the high achievers.

Student Teams-Achievement Divisions (STAD)

For use in grades 2-12 to develop Math, Language Arts, Science, Social Studies skills such as graph reading and geography, and any material with single right answers. (See Slavin, 1978, 1986, 1991a)

STAD appears in the literature as a refinement of the TGT method. Slavin (1988) called STAD a "relatively quiet, businesslike form of Student Team Learning" which takes "less instructional time than TGT" (p. 19). The format is the same except that the base groups are study groups to prepare team members to take quizzes individually. The scores on the quizzes are "compared to their own past averages, and points awarded based on the degrees to which students can meet or exceed their own earlier performances" (Slavin, 1991a, p. 74). Individual points are added to form team scores.

Team Assisted Individualization (TAI)

For use in grades 2-8 Mathematics. (See Slavin, 1991a; Slavin, Lea ey, & Madden, 1986)

TAI . s a content-specific cooperative method for Math. Students test for placement in an individualized sequence of lessons. Students "take responsibility for checking each others' work and managing the flow of materials" freeing teachers to present lessons to small groups of students who may be working on the same unit in the Math sequence (Slavin, 1991a, p. 74).

Cooperative Integrated Reading and Composition (CIRC)

For use in grades 2-6 to develop Reading, Writing, and Language Arts skills. (See Slavin, 1991a; Stevens, Madden, Slavin, & Farrish, 1987)

CIRC is also content-specific, using ability-homogeneous reading groups, ability-heterogeneous teams, and pairs or triads which engage in activities such as reading to each other, summarizing stories, writing responses to stories, and practicing spelling. CIRC follows the pattern of teacher instruction and team practice to prepare for pre-assessments. "Students do not take the quiz until their teammates have determined that they are ready" (Slavin, 1991a, p. 74). The team reward is based on "the average performance of all team members on all reading and writing activities" (Slavin, 1991a, p. 74).

Jigsaw/Jigsaw II

For use in grades 3-12 to develop Social Studies, Literature, and Science skills, and any material when information comes from books. (See Aronson, Blaney, Stephan, Sikes, & Snapp, 1978; Slavin, 1986).

Jigsaw plays out the puzzle metaphor; each student in a team is responsible for mastery of one part of the material, so that mastery of the whole of the material is accomplished by members sharing their expertise with their group. To accomplish the individual mastery, students from the base group are sent out to "expert groups" which master their assigned part of the whole. Jigsaw II simply adds the condition that all students read all material before they are assigned a specialized "part" to master.

Learning Together

Use not specified by grade or subject; majority of research done in public school settings. (See Johnson & Johnson, 1987, 1991)

Learning Together is primarily a concept, rather than a specific system of cooperative learning. Johnson and Johnson (1987) are conspicuous in their inclusion of basic interpersonal and group skills. Lists and descriptions of cooperative learning components appear along with specific applications to public school contexts. Johnson and Johnson (1991) included less specific applications and the discussion of "formal" and "informal" cooperative learning groups.

Formal cooperative learning groups include TGT, STAD, TAI, CIRC, and Jigsaw. Any base group technique will qualify the style as a formal group. Longevity is the determinant of a "base" group.

Informal cooperative learning groups include bookends and various applications of paired sharing ("each one teach one").

Group Investigation

For use in middle school Social Studies (tested only in Israel). (See Sharan & Sharan, 1976)

Similar to Jigsaw, Group Investigation divides units of material into subtopics researched individually by group members. Their research culminates in a display or report of the subtopic to the group.

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